

Application Serial No. 10/763,657
Reply to Office Action of June 29, 2009

PATENT
Docket: CU-6001

Amendments to the Claims

The listing of claims presented below replaces all prior versions, and listings, of claims in the application.

Listing of claims:

1. (currently amended) A method for manufacturing an electroluminescent element using a photolithography method comprising:
 - a heterochromatic light emitting layer forming process of forming a heterochromatic light emitting layer on a substrate, provided with a light emitting part of at least one color and a protecting layer formed so that the light emitting part and the ~~end-part~~ sidewall portion thereof are not bared, by coating a heterochromatic light emitting layer forming coating solution showing a color different from the light emitting part;
 - a photoresist layer for the heterochromatic light emitting layer forming process of forming a photoresist layer for the heterochromatic light emitting layer by coating a photoresist on the heterochromatic light emitting layer;
 - a photoresist layer for the heterochromatic light emitting layer patterning process of patterning the photoresist layer for the heterochromatic light emitting layer by pattern exposure and development so as only the photoresist layer for the heterochromatic light emitting layer of a part where the heterochromatic light emitting part is to be formed will remain;
 - a heterochromatic light emitting part forming process of forming a patterned heterochromatic light emitting part having a photoresist layer for the heterochromatic light emitting layer on the surface by removing the heterochromatic light emitting layer bared by removing the photoresist layer for the heterochromatic light emitting layer;
 - a protecting layer for the heterochromatic light emitting layer forming process of forming a protecting layer for the heterochromatic light emitting layer by coating a protecting layer forming coating solution so as to cover the heterochromatic light emitting part; and
 - a protecting layer for the heterochromatic light emitting layer patterning process of exposing and developing the protecting layer for the heterochromatic light emitting layer so as not to bare the heterochromatic light emitting part and the ~~end~~

Application Serial No. 10/763,657
Reply to Office Action of June 29, 2009

PATENT
Docket: CU-6001

~~part~~ sidewall portion thereof.

2. (original) The method for manufacturing an electroluminescent element according to claim 1 wherein, after the heterochromatic light emitting part forming process, a photoresist for the heterochromatic light emitting layer peeling process of peeling off the photoresist layer for the heterochromatic light emitting layer remaining on the heterochromatic light emitting part is carried out, and then, the protecting layer for the heterochromatic light emitting layer forming process is carried out.

3. (currently amended) A method for manufacturing an electroluminescent element using a photolithography method comprising:

a second light emitting layer forming process of forming a second light emitting layer by coating a second light emitting layer forming coating solution on a substrate provided with a first light emitting part and a first protecting layer formed so as not to bare the first light emitting part and the ~~end-part~~ sidewall portion thereof;

a photoresist layer for the second light emitting layer forming process of forming a photoresist layer for the second light emitting layer by coating a photoresist on the second light emitting layer;

a photoresist layer for the second light emitting layer patterning process of patterning by pattern exposure and development of the photoresist layer for the second light emitting layer so as only the photoresist layer for the second light emitting layer of a part where the second light emitting part is to be formed will remain;

a second light emitting part forming process of forming a patterned second light emitting part having a photoresist layer for the second light emitting layer on the surface by removing the second light emitting layer bared by removing the photoresist layer for the second light emitting layer;

a second protecting layer forming process of forming a second protecting layer by coating a protecting layer forming coating solution so as to cover the second light emitting part;

a second protecting layer patterning process of exposing and developing the second protecting layer so as not to bare the second light emitting part and the ~~end~~ part sidewall portion thereof;

Application Serial No. 10/763,657
Reply to Office Action of June 29, 2009

PATENT
Docket: CU-6001

a third light emitting layer forming process of forming a third light emitting layer on a substrate, provided with the first light emitting part, the first protecting layer formed so that the first light emitting part and the ~~end-part~~ sidewall portion thereof are not bared, the second light emitting part and the second protecting layer formed so that the second light emitting part and the ~~end-part~~ sidewall portion thereof are not bared, by coating a third light emitting layer forming coating solution;

a photoresist layer for the third light emitting layer forming process of forming a photoresist layer for the third light emitting layer by coating a photoresist on the third light emitting layer;

a photoresist layer for the third light emitting layer patterning process of patterning the photoresist layer for the third light emitting layer by pattern exposure and development so as only the photoresist layer for the third light emitting layer of a part where the third light emitting part is to be formed will remain;

a third light emitting part forming process of forming a patterned third light emitting part having a photoresist layer for the third light emitting layer on the surface by removing the third light emitting layer bared by removing the photoresist layer for the third light emitting layer.

4. (original) The method for manufacturing an electroluminescent element according to claim 3 wherein, after the second light emitting part forming process, a photoresist for the second light emitting layer peeling process of peeling off the photoresist layer for the second light emitting layer remaining on the second light emitting part is carried out, and then, the second protecting layer forming process is carried out.

5. (original) The method for manufacturing an electroluminescent element according to claim 1 wherein each light emitting part is patterned together with buffer layers, and formed on the buffer layers.

6. (original) The method for manufacturing an electroluminescent element according to claim 3 wherein each light emitting part is patterned together with buffer layers, and formed on the buffer layers.

Application Serial No. 10/763,657
Reply to Office Action of June 29, 2009

PATENT
Docket: CU-6001

7. (original) The method for manufacturing an electroluminescent element according to claim 1 using a photolithography method wherein each light emitting part forming process is a process of patterning each light emitting layer of a part where each photoresist layer is removed by using dry etching.

8. (original) The method for manufacturing an electroluminescent element according to claim 3 using a photolithography method wherein each light emitting part forming process is a process of patterning each light emitting layer of a part where each photoresist layer is removed by using dry etching.

9. (original) The method for manufacturing an electroluminescent element according to claim 7 wherein the dry etching is a reactive ion etching.

10. (original) The method for manufacturing an electroluminescent element according to claim 8 wherein the dry etching is a reactive ion etching.

11. (original) The method for manufacturing an electroluminescent element according to claim 7 wherein oxygen alone or a gas containing oxygen is used for the dry etching.

12. (original) The method for manufacturing an electroluminescent element according to claim 8 wherein oxygen alone or a gas containing oxygen is used for the dry etching.

13. (original) The method for manufacturing an electroluminescent element according to claim 7 wherein atmospheric pressure plasma is used for the dry etching.

14. (original) The method for manufacturing an electroluminescent element according to claim 8 wherein atmospheric pressure plasma is used for the dry etching.

15. (new) The method for manufacturing an electroluminescent element

Application Serial No. 10/763,657
Reply to Office Action of June 29, 2009

PATENT
Docket: CU-6001

according to claim 1, wherein, in the protecting layer for the heterochromatic light emitting layer patterning process, the protecting layer for the heterochromatic light emitting layer is exposed and developed so as the developed protecting layer for the heterochromatic light emitting layer covers the heterochromatic light emitting part by a width larger than the width of the heterochromatic light emitting part and by a size to the extent not covering the light emitting part.